

IN THE CLAIMS:

1.-42. (Cancel without prejudice or disclaimer of any scope or subject matter)

43. (New) A method of inspecting a patterned wafer, comprising:

emitting light containing a plurality of wavelengths from a light source;

illuminating the patterned wafer with the light;

detecting with a sensor, an image of a pattern on the patterned wafer as illuminated by the light, and outputting from the sensor, a signal concerning a detected image; and

processing the signal outputted from the sensor and obtaining information of defects of the pattern;

wherein light components having a predetermined wavelength range as selected from the light emitted from the light source, are used to illuminate the patterned wafer.

44. (New) A method according to the Claim 43, wherein in the detecting, the image of the pattern is detected by a time delay integration sensor.

45. (New) A method according to the Claim 43, wherein in the illuminating, the patterned wafer is illuminated with ultra violet light selected from the light emitted from the light source.

46. (New) A method according to the Claim 43, wherein in the illuminating, a wavelength selection filter selects the light components having a predetermined wavelength range of 600 nm or under from the light emitted from the light source.

47. (New) A method of inspecting a patterned wafer, comprising:
illuminating a specimen through an objective lens with wavelength light having a predetermined wavelength range as selected from light having a plural wavelengths emitted from a light source;

detecting with a time delay integration sensor, a light reflected from the patterned wafer by the wavelength light and passed through the objective lens; and

processing the output signal from the time delay integration sensor and obtaining information relating to a defect of the patterned wafer.

48. (New) A method according to the Claim 47, wherein in the illuminating, the patterned wafer is illuminated with ultra violet light selected from the light emitted from the light source.

49. (New) A method according to the Claim 48, wherein the time delay integration sensor outputs signals in parallel, and the signals outputted in parallel are processed in parallel in the processing operation.

50. (New) A method according to the Claim 47, wherein in the processing, the output signal from the time delay integration sensor is processed using a

variable defect detection sensitivity which varies according to a position on the patterned wafer.

51. (New) A method according to the Claim 47, wherein in the processing, the output signal from the time delay integration sensor is processed using a variable defect detection sensitivity which varies according to the pattern being inspected.

52. (New) An apparatus for inspecting a patterned wafer, comprising:
a light source to emit light containing a plurality of wavelengths;
an illuminating unit to illuminate the patterned wafer with light emitted from the light source;

a detecting unit to detect an image of a pattern on the patterned wafer as illuminated by the illuminating unit, and to output a signal concerning a detected image; and

a processing unit to process the signal outputted from the detecting unit and to obtain information of defects of the pattern;

wherein, the illuminating unit selects predetermined light components having a predetermined wavelength range as selected from the light emitted from the light source, to illuminate the patterned wafer.

53. (New) An apparatus according to the Claim 52, wherein the detecting unit detects the image of the pattern with a time delay integration sensor.

54. (New) An apparatus according to the Claim 52, wherein the light source emits ultra violet light, and the illuminating unit selects the ultra violet light from the light emitted from the light source as the predetermined light components having a predetermined wavelength range.

55. (New) An apparatus according to the Claim 52, wherein the light source is a lamp.

56. (New) An apparatus according to the Claim 52, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to a position on the patterned wafer.

57. (New) An apparatus according to the Claim 52, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to the pattern being inspected.

58. (New) An apparatus for inspecting a patterned wafer, comprising:

a light source to emit light containing plural wavelengths;

an illuminating unit having an objective lens to illuminate the patterned wafer through the objective lens with wavelength light having a predetermined wavelength range as selected from the light emitted from the light source;

a detecting unit to detect an image of the patterned wafer as illuminated by the illuminating unit through the objective lens, with a time delay integration sensor;
and

a processing unit to process an output signal from the time delay integration sensor and to obtain information relating to a defect of the patterned wafer.

59. (New) An apparatus according to the Claim 58, wherein the light source emits ultra violet light, and the illuminating unit selects the ultra violet light from the light emitted from the light source, to illuminate the patterned wafer.

60. (New) An apparatus according to the Claim 58, wherein the illuminating unit includes a wavelength selection filter to select light components having a predetermined wavelength range of 600 nm or under from the light emitted from the light source, to illuminate the patterned wafer.

61. (New) An apparatus according to the Claim 58, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to a position on the patterned wafer.

62. (New) An apparatus according to the Claim 58, wherein the processing unit processes the signal outputted from the detecting unit with a variable defect detection sensitivity which varies according to the pattern being inspected.